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THE DISTRIBUTION OF *BARTONIA* (GENTIANACEAE) IN LOUISIANA

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ABSTRACT

We describe the distribution of *Bartonia* in Louisiana. *Bartonia verna* (Michaux) Raf. *ex* Barton is confined to southeastern Louisiana, *B. paniculata* (Michaux) Muhl. occurs in southeastern and in northern Louisiana, and *B. virginica* (L.) BSP occurs in three locations, two of which extend the described range of this species.

KEY WORDS: *Bartonia*, Gentianaceae, Louisiana

As part of a continuing study of Louisiana pitcher plant bogs, we discovered that the distribution of *Bartonia*, a frequent member of the bog community (MacRoberts & MacRoberts 1990), is incorrectly described in the Louisiana botanical literature (see MacRoberts 1989 for a summary of current information on the distribution of this genus in Louisiana). Consequently, we examined all *Bartonia* specimens from the major Louisiana herbaria (LSU, LAF, USLH, NLU, NATC, NOLS, NO, LTU, LSUS, Centenary College). We studied the descriptions and keys in all southeastern floras that include *Bartonia* and ultimately settled on Gillett's (1959) and Correll & Johnston's (1970) descriptions since most of the others are derivatives of these two. The same characters are used by all authors: leaf placement, petal size and shape, and flowering season. Knowing that Edwin Bridges and Steve Orzell had done extensive work on the flora of southwest Louisiana and southeast Texas, we sent them an earlier version of this paper. Steve Orzell replied with information on *Bartonia*, which he has given us permission to incorporate here.

Bartonia verna (Michaux) Raf. *ex* Barton.

We examined 29 herbarium sheets of this taxon from Louisiana. MacRoberts (1989) and Craig, *et al.* (1987) report it from St. Tammany Parish only. Gillett (1959) reports it from Tangipahoa and Orleans parishes but gives no voucher specimens. Among the sheets we examined, we found one from Tangipahoa Parish (*Brown 1608* [LSU]) and 28 from St. Tammany Parish

(e.g., *Givens 2534* [LSU]) (Figure 1). The taxon has also been reported from hillside seepage bog habitat in southeast (Tyler Co.) Texas (Correll & Johnston 1970; Ajilvsgi 1979: Bridges & Orzell pers. comm.), but not as yet from southwest Louisiana where suitable habitat occurs (Bridges & Orzell 1989).

Bartonia texana Correll.

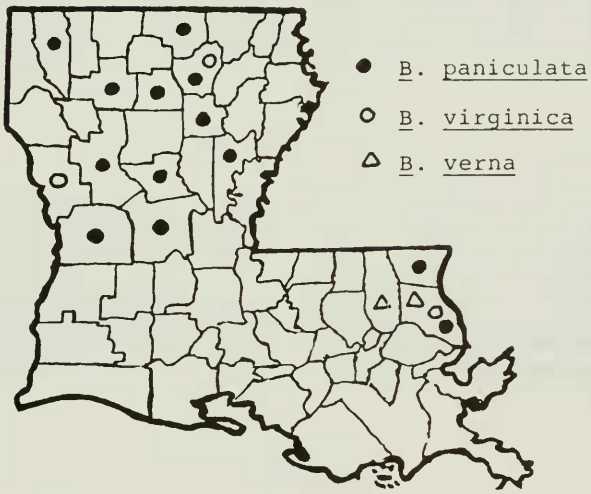
We were especially interested in locating, if possible, any Louisiana examples of this Texas endemic (Correll 1966; Nixon & Ward 1981; but see Wood & Weaver 1982:479). We found no specimens that could be assigned to this taxon, but certainly do not consider this unexpected since the plant is an inconspicuous, late autumn blooming plant that has not been subject to any field searches. Since little is known about this species, we give the following information from Bridges & Orzell (pers. comm.):

> *Bartonia texana* is endemic to semi-evergreen broadleaf acid seep forests (SEBASF) in southeast Texas, and possibly, Louisiana. We have collections from five counties in southeast Texas. *Bartonia texana* consistently occurs in these seep forests downslope from the calcareous Fleming Formation (formation also in western Louisiana). Our collections of *B. texana* are from SEBASF where there apparently is some influence on the groundwater seepage from the Fleming Formation. It is absent from similar SEBASF in which the seepage is derived solely from deep sandy formations (*i.e.*, Willis, Catahoula, etc.) which lack some interface with the Fleming Formation. Suitable habitat exists in adjacent southwest Louisiana and it should be sought in SEBASFs proximal to the Fleming Formation.

Bartonia paniculata (Michaux) Muhl.

MacRoberts (1989) could find no parish record of *Bartonia paniculata* in the Louisiana botanical literature, even though this species should be common, as it occurs in all surrounding states (Gillett 1959; Wood & Weaver 1982; Correll & Johnston 1970; Taylor & Taylor 1989; Steyermark 1963; Smith 1988). We located 37 herbarium sheets of this taxon, most of which had been misindentified as *B. virginica*. *Bartonia paniculata* is widely distributed in the state, and its seeming absence from south central and southwest Louisiana is probably an effect of failure to collect this area adequately, especially in the late autumn (Figure 1). Representative specimens are: St. Tammany Parish, *Givens 5000* (LSU); Natchitoches Parish, *MacRoberts & MacRoberts 900* (LSUS); Vernon Parish, *Thomas 74025* (NLU).

Figure 1. Distribution of Bartonia.



Bartonia virginica (L.) BSP.

This species has been reported from numerous locations in Louisiana (MacRoberts 1989), even though Gillett (1959) reports it only for southeastern Louisiana, Wood & Weaver (1982) report it as occurring in "southern" Louisiana, and no one reports it in the states north or west of Louisiana (Correll & Johnston 1970; Taylor & Taylor 1989; Smith 1988; Bridges & Orzell pers. comm.). We located fourteen herbarium sheets of this taxon that place it in three widely separated parishes (Figure 1). Two of these records extend the known range of *Bartonia virginica* considerably westward. Representative specimens are: Ouachita Parish, *Thomas 9862, Thomas 11012* (NLU); St. Tammany Parish, *Allen 9305* (NLU); and Sabine Parish, *Brown 6111* (LSU).

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